Scientific American.

THE ADVOCATE OF INDUSTRY, AND JOURNAL OF SCIENTIFIC, MECHANICAL AND OTHER IMPROVEMENTS.

Vol. 3. New York, September 16, 1848. No. 52.

THE
SCIENTIFIC AMERICAN:
CIRCULATION 11,000.
PUBLISHED WEEKLY.
At 128 Fulton Street, New York (Sun Building,) and 13 Court Street, Boston, Mass.
By Munn & Company.
The Principal Office being at New York.

TERMS---$2 a year---$1 in advance, and the remainder in 6 months.

☞See advertisement on last page.

Poetry.

THE POOR VOTER.

They knew that I was poor,
And they thought that I was base,
And would readily endure
To be covered with disgrace.
They judged me of that tribe
Who on dirty mammon dote,
So they offered me a bribe
For my vote.

My vote—it is not mine
To do with as I will,
To be cast like pearls to swine,
For these wallowers in ill.
It is my country's due,
And I'll cast it while I can,
For the honest and the true,
Like a man.

Ah no! I'll hold my vote
As a treasure, and a trust—
My dishonor none shall quote
When I'm mingled with the dust.
And my children, when I'm gone,
Shall be strengthened by the thought
That their father was not one,
To be bought.

A CHRISTIAN LIFE.

He envied not the pomp and power
Of kings in their triumphant hour,
The deeds that win a lofty name,
The songs that give to bards their fame.

He sighed not for gold that shines
In Guinea's brooks, in Ophir's mines;
He stood not at the festivals
Of nobles in their gorgeous halls,

He walked on earth as wood-streams pass,
Unseen beneath the freshen'd grass;—
His were pure thoughts, and humble faith,
A blameless life, and tranquil death.

He kept, in days of strife and wrath,
The Christian's straight and narrow path;
But weep thou not:—we must not weep,
When they, who rest in Jesus, sleep.

MY MOTHER'S SMILE.

My mother's smile! how oft in sleep
It lies like sunshine on my heart,
Till when I wake, I wake to weep
That aught so lovely should depart.

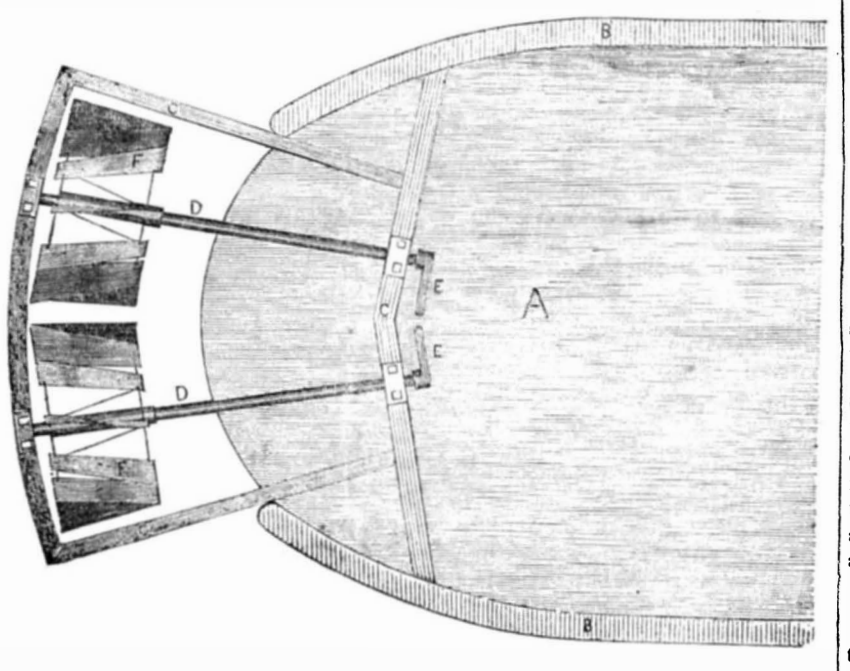
I sometimes sit and dream of fame,
But when I foolishly the while
Would link its glories to my name,
I smile a sad reproving smile.

As o'er I number, one by one,
Through all my youth's misguided years,
The things which I should not have done,
How darkly dim that smile appears!

But when I hush my bosom's wrath,
Or smooth beneath the pilgrim's feet
The weary and uneven path—
O, then that smile is heavenly sweet!

When last I kissed my mother's brow,
She called me a poor orphan child,
And with me in my spirit now
Is the last smile she ever smiled.

BARKER'S TORTUOUS PADDLE WHEEL.



☞This engraving is a representation of a new plan for propelling vessels, invented by Mr Benjamin Barker, of Ellsworth, Maine, and which he names the "Inclined Tortuous Paddle." The above engraving is taken from a small model, and its nature will be readily understood. It is a kind of screw and paddle combination applied to the stern, the paddle being somewhat broader at one end. This is a vertical view. A is the interior of the vessel, B B, the sides, D D, are shafts of the paddles, C C is the frame work for the bearings of the shafts, F F, are the paddles of an angular form. These paddles are inclined to each axis respectively at an angle of about ten degrees—with the interior edge inclined at a somewhat less angle than the exterior edge, in proportion as it is nearer the axis, thereby giving the paddle its tortuous form. E E, are cranks for driving D D, by shafts from the engine. As the virtue of this method will much depend on the speed, cog wheels will have to be used, so that the paddle shafts may have a greater speed than the main shafts.

If power be applied to the cranks causing the wheels to revolve and the paddles move towards the centre, as these are immersed in water and inclined in their axis of motion, a speed will be given to a vessel—in the opinion of the inventor—greater than by any other method of propulsion. Many plans of propulsion have been tried and set aside, and for that reason there are few who will express an opinion, but from beholding an experiment. Experiment indeed is the only true test of utility. Yet the screw has its defenders and friends and many eminent men believe it to be superior to the paddle wheel. The paddle wheel again has its friends, and we must say they are not yet driven to the defensive, in regard to its merit. This combination propeller of Mr. Barker is different from any that we have seen proposed. The only resemblance to it to our knowledge is that of Daniel Bernoulli, and his differed materially in the arrangement, which was not so good. Bernoulli's plan consists of planes immersed in the water parallel to the sides of the vessel and turned in a collar which moved in a plane perpendicular to the keel, and which were thus to move the vessel forward. It requires both time and many expements to perfect every invention, and there are some things about this that may be modified for the better, such as a greater incline of dip in each wheel, but when we talk about these things, we should not forget that "Morgan's Paddle Wheel" that lay dormant so long on the other side of the Atlantic, is now coming into general use although it was long neglected and despised.

Preservation of Butter.

The method used by the Tartars consists in fusing the butter in a water bath, at a temperature of 190° Farenheit, and retaining it quiescent in that state until the gaseous matter has settled, and the butter become clear; it is then to be decanted, passed through a cloth, and cooled in a mixture of salt and ice, or at least in spring water, without which it would crystallize, and not resist so well the action of air. Preserved in close vessels and in cold places, it may be kept for six months as good as it was on the first day, especially if the upper part be excepted. If, when used, it be beaten up with one sixth of cheese, it will have all the appearance of fresh butter. The flavour of rancid butter may be removed almost entirely by similar melting and coolings.

The Copper Ore from Cliff Mine, Lake Superior, is being smelted at Pittsburg, Penn. It yields from eighty to ninety per cent pure copper, in addition to a small quantity of silver.

Chinese method of making Sheet Lead.

The method of making sheet-lead employed by the Chinese, is carried on by two men. One is seated on the floor, with a large flat stone before him, and with a moveable flat stone-stand at his side. His fellow workman stands beside him with a crucible filled with melted lead, and having poured a certain quantity upon the stone, the other lifts the moveable stone, and, dashing it on the fluid lead, presses it out into a flat and thin plate, which he instantly removes from the stone. A second quantity of lead is poured in a similar manner, and a similar plate formed, the process being carried on with singular rapidity. The rough edges of the plates are then cut off, and they are soldered together for use.

It appears, from a return just made to Parliament, that the declared value of British machinery and millwork, exported from the United Kingdom in the year ended on the 5th of January last, was £1,263,015.

RAIL ROAD NEWS.

Norwich and Worcester Railroad.

The Norwich and Worcester Railroad Company have sold their boats, the Worcester, Cleopatra and Knickerbocker, to Drew, Newton, Coit & Co. by which operation the debt of the Company has been reduced some $200,000. The Directors are introducing economy into the management of the road, which will make a very large reduction in the yearly expenses.

The Broad and Narrow Guage of Rail Roads.

The value of the broad and narrow guage, so far as profit and loss in concerned, seems to be in favor of the narrow, as being less expensive according to the practical working of both systems. The question in a mercantile light has lately been examined in England by commissioners appointed for the purpose. It is to be hoped that the New York and Erie may prove an exception to this conclusion, at least, that it may be equally profitable as any other line.

A Funny Railroad Accident.

On Saturday evening the 2d inst. as the last train of cars from Lowell was approaching Boston two of the hindermost cars accidentally parted from the train in Medford, about five miles distant. The occurrence was not discovered, however, until after the conductor had supped in the city and returned to the depot, when he was astonished to find that two of his cars, containing some 100 passengers each were "among the missing!" He instantly dispatched a locomotive on the return track, and the lost cars, with their population, were brought into the city after a detention of about an hour and a half, by this both amusing and vexatious oversight.

Tribute of Respect.

By the Reading Pa., Herald, we learn that the mechanics at Reading R. R. machine shop have presented Mr. L. J. Kirk, the master machinist, with a splendid silver pitcher and silver goblets as a mark of esteem. The present is a magnificent one. The pitcher and goblets are beautifully chased with figures representing railroad cars, with a figure of the patent steam hammer invented by Mr. Kirk. We take great pleasure in noticing such instances of good will among mechanics and their employers. The utmost good feeling and good will in workshops among the whole of the hands is a source of great pleasure.—More work is done and done better in such shops.

Current of Niagara.

The current of the Niagara river for the first five hundred feet below the Suspension Bridge, runs at the rate of nineteen miles per hour; for the next eight hundred feet it runs at the rate of twenty-five miles per hour—giving an average of about twenty-three miles per hour for the first quarter of a mile below the bridge.

Iron Dross Flags.

In extensive furnaces and iron works, the dross or slag collects and is thrown out as useless. A French machinist, some years ago, devised the plan of making a good use of this material. He accordingly laid moulds, or forms in a situation to allow the dross to flow into them. The dross is allowed to cool very gradually, so as to render it tough; and to effect this, the forms are placed so as to receive a portion of the surplus flame of the furnace. The inventor thus forms flag stones, blocks for building, or for paving and other useful purposes, and they have been found to be very durable and convenient; exhibiting a hardness in many instances superior to granite.

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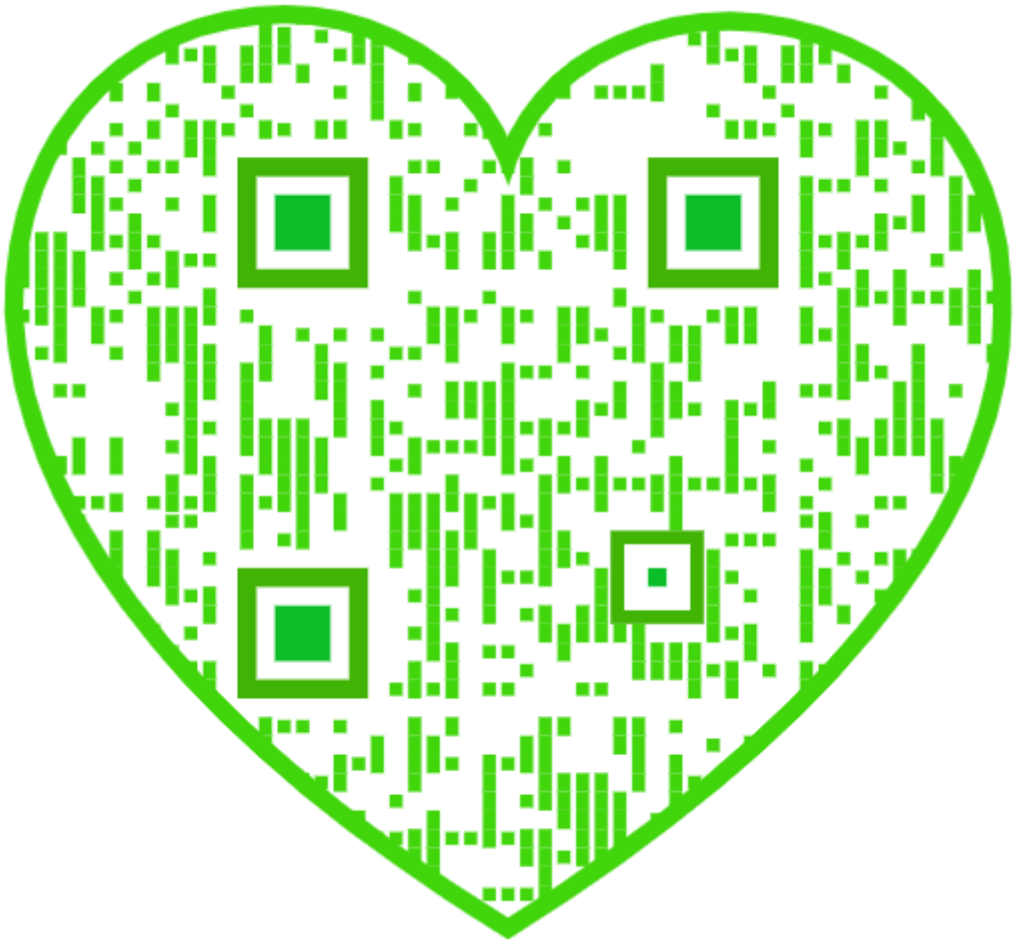

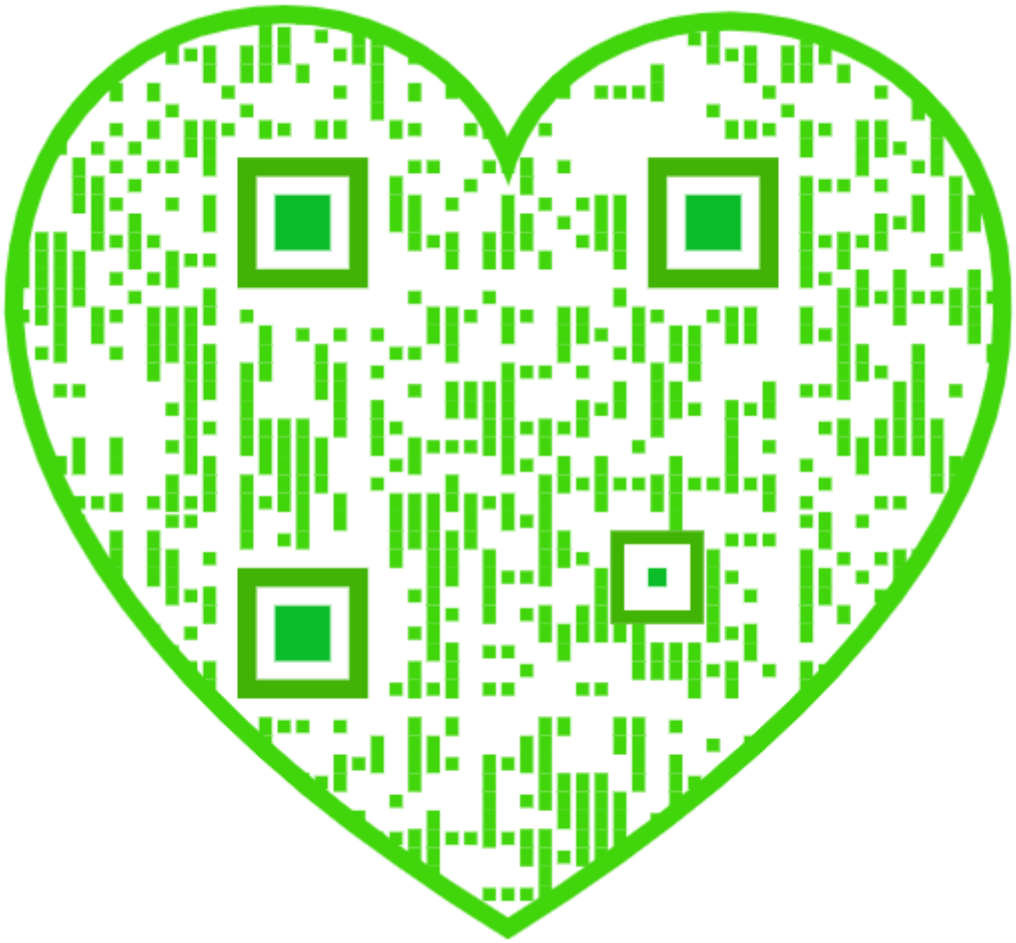

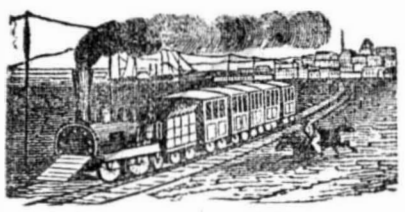

Destructive Fires.

If we spoke in reference to judgments of an appalling nature, we might distinctly point to the devastating fires that have lately scourged several cities of our land. Not long since one sixth of Albany fell a prey to the devouring element, and on Sunday morning last a destructive fire laid over two hundred buildings in the city of Brooklyn in ashes. Lives have been lost at all of these fires and this is the most heart rending circumstance connected with these calamities. One of the most distressing events that ever occurred was the burning of the splendid packet ship Ocean Monarch in the English Channel, the news of which was brought out by the Hibernia. No less than 151 human beings perished, some by the flames, others by falling spars, and others drowned.

Shok oef an Earthquake.

Two shocks of an earthquake were felt in in this city and vicinity, on Friday night last week about half past ten o'clock. The first shock was very slight, lasting nearly a minute It was more of a tremulous motion than a shock. About one minute after, another shock was felt—a short, quick, jerking, undulating motion, accompanied by a rumbling noise, like a heavy vehicle passing rapidly ver the pavement The second or principal shock lasted only five or six seconds. In New Jersey its duration is stated to have been eight or ten seconds. On Long Island, the second shock and the sound appeared to come from the north, passing southward.

We felt the shock with terrible distinctness and had it been 1843, we would have been thinking about Father Miller. We believe however, that the shocks were from the south west, in the great line of the galvanic current. The resistance to the current must have been towards the North East.

Coal and Gold.

From the annual report of the Director of the U. S. Mint, it appears that the value of all the gold coined in the U. S. mints for twenty four years prior to 1847, was $12,741,653, or somewhat exceeding the average sum of half a million a year--a very considerable addition to the stock of American wealth ; but it appears from the returns of the coal trade in Pennsylvania that the value of this commodity brought to market in that State is annually equal to the above large amount :—the last year, for example, the value of her anthracite brought down to tide-water—nearly 3,000,000 tons—was actually equal to the value of all this gold dug up in the South during the whole twenty-four years. From this it appears that our Northern (Maryland as well as Pennsylvania) coal mines are more valuable gold mines than those of the South.

A Mexican Churn.

The Mexicans have a peculiar churn, which may probably suit a certain class of community right well. It puts all others far in the back ground, as it has the merit of delivering the butter fresh at the doors of their customers. It is described thus:

" Two tin cans are enclosed in a green cow hide, the size to correspond to the quantity of milk. The hide on drying will shrink and adhere to the cans. These cans are partly filled with milk, and placed on a hard trotting horse like saddle bags ; a person then mounts the horse and rides seven or eight miles into the city ; the motion of the horse effects the separation of the butter from the milk, and the rider has only to pocket the cash for his butter and buttermilk and wend his way home at his leisure.

So scarce are laborers in Australia, that the waggons in which copper ore is conveyed from the mines to Adelaid, where it is shipped to England, are driven by boys between ten and fifteen years of age.

The Hot Springs of Arkansas.

In the State of Arkansas there are some singular springs to which are ascribed some medical virtues and are a subject of no little wonder. They are in Hot Springs Co., about 30 miles west of Little Rock, on a creek, which empties into the Washita river, 6 miles distant, in latitude 31½. The creek, which rises in the mountains some 4 miles above, winds its way between two hills, running north and south, with a valley between, and which is in some places fifty, and in some one hnndred yards wide. On the side of one of the hills, which is very precipitous, and rises to the height of 100 feet the Hot Springs break out in various positions, from the margin of the creek to the summit of the hill. The number of Springs is said to be about 75 or 80, within a space of 500 yards, but the number is not uniform, new springs breaking and old ones filling up. There are numerous cold water springs within a few yards of the hot ones. The heat of the water is sufficient to scald a hog or fowl, to boil eggs or wash cloths, without the aid of fire.

The creek is so much heated by the springs that horses and cattle will not drink of it for a mile below. The United States claim the Hot Springs as a reservation ; individuals claim them under pre-emption. The consequence is, that only temporary improvements are made, or will be made, until the title is confirmed. These Springs are destined to attract great atttention for their invaluable healing properties, as well as natural curiosity. In the same vicinity is the Magnetic Cove, a large bed of magnetic rock, and the Crystal Mountain, where beautiful crystals of various forms are found. In several of the mountains are found the best quarries of whetstone known in the United States.

Mrs. Fry's Rules.

First, never lose any time ; I do not think that lost which is spent in amusement or recreation, some time every day ; but always be in the habit of being employed. Second, never err the least in truth. Third, never say an ill thing of any person, when I can say a good thing of them : not only to speak charitably, but feel so. Fourth, never be irritable or unkind to any body. Fifth, never indulge in luxuries that are not necessary.—Sixth do all things with consideration, and when my path to act right is more difficult, feel confidence in that power alone which is able to assist me, and exert my own powers as far as they go.

Flowers and the Law of Gravity.

As an instance of the adaptation between the the force of gravity and forces which exist in flowers—some flowers grow with the hollow of their cups upwards ; others " hang the pensive head," and turn the opening downward. The positions in these cases depend upon the length and flexibility of the stalk which supports the flower, or in the case of *euphorbia*, the germen. It is clear that a very slight alteration in the force of gravity, or in the stiffness of the stalk, would entirely alter the position of the flower-cups, and thus make the continuation of the species impossible. We have, therefore, here a little mechanical contrivance, which would have been frustrated if the proper intensity of gravity had not been assumed in the rekoning. An earth, greater or smaller, denser or rarer than the one on which we live, would require a change in the structure and strength of the footstalks of all the little flowers that hang their heads under our hedges. There is something curious in thus considering the whole mass of the earth, from pole to pole, and from circumference to centre, as employed in keeping a snowdrop in the position most suited to the promotion of its vegetable health.

Martin Goldsborough, Esq., of Talbot county, Md. has a farm containing about 240 acres of cleared land, which divided into three fields makes 80 acres each. Having accurately laid off one acre, and measured it, it was found to yield the enormous quantity of fifty odd bushels of wheat—and if the balance should give the same yield, it will be upwards of 4,000 bushels on eighty acres.

In 1847, there were 740 patents granted in England, and the fees amounted to £32,977.

Perpetual Roses.

Many cultivators of this fine new class of roses, " waste its sweetness" by allowing it carry all its blossoms in the month of June. Now to have the perpetual rose fully enjoyed, it should not be allowed to bloom at all in rose season. Roses are so common then that it not at all prized while blooming, from midsummer to November it is highly prized by all persons.

The way to grow it in perfection, is to pinch out, as soon as visible, every blossom bud that appears at the first crop, say from the middle of May to the middle of June. This reserves all the strength of the plant for the after bloom; and accordingly you have large clusters of roses in July, August, September October, and those who have not tried this stopping system can have no idea of, La Rein, Madame Laffay, Compte de Paris, and the Dutchess of Sutherland are particularly superb varieties under this treatment. Indeed, they may be recommended as among the best in the perpetuals.

International Postage.

Mr. Bancroft, the American Minister in England, has written home that there are reasons for believing that an international postage law will be agreed upon shortly,—a universal ocean penny postage we hope ; at present the expence of foreign letters are beautiful taxes upon the people of both nations.

Soda Manufacture.

A new factory to make soda is about to be started at Birmingham near Pittsburg. We are glad to see this. Soda is much used in the manufacture of glass and we are determined to urge the manufacture of Plate Glass at home. We shall describe the process with illustrations in our next volume.

Death of Berzelius.

A letter from Stockholm, Sweden, announces the death. on the 7th of August, of the illustrated chemist Berzelius, aged 69 years.

Berzelius was a great man and his name is familiar to every one who has taken an interest in modern chemistry.

Drinking in the dark.

It is reported there is a young lady residing in Coeymans, county of Albany, N. Y., who eighteen months ago drank with water in the dark, a small snake, since which time her body has grown nearly as large as a barrel, and the physicians attending her say the snake now is about the size of a man's arm. All fudge.

Pictorial National Library.

The publishers, Wm. Simmons & Co., No 12 School st., Boston, have kindly favored us with the September number of the above magazine, which we have perused with much interest. Each number contains 52 pages, is full of original engravings, and published monthly at $2 per annum.

New Project for Reporting.

A corps of Phonographers, reporters and compositors, is about to be organized in Philadelphia, to do the Congressional reporting. The duty of the compositors will be to set up the type directly from the report, and it is said that this is not only feasible but has been often done.

On the evening of the 7th ult. two balloons started at the same moment from the Cremorne Gardens, London, for a race, each containing four persons. The weather being clear and favorable, the sight was very interesting.—Lieut. Gale commanded the "Royal Cremone," and Mr. Gybson the "Royal Albert." The ascent was imposing and magnificent ; they kept so near together that the voyagers could hear each other's voices. They attained an altitude of a mile and a half and descended without accident, near to each other, about sixteen miles from London.

A new spring of iodine has been discovered between Toeltz and Heilbroun (Bavaria); it is supposed to communicate with that of Adelaide.

Ireland pays some $3,500,000 per annum for the support of a church establishment, in which not over 700,000 of her people feel the slightest interest.

TO CORRESPONDENTS.

" J. M. of Pa."—We have forgotten what your question was in regard to the mandril. When you write again please tell us. We are obliged to you for the drawing you sent, and shall probably have them engraved during the volume. You can obtain all the information you desire relative to Parker's Water Wheel, by directing a letter to O. H. Parker Esq., care Sutton & Smith, Philadelphia.

" F. G. of Long Island."—The Prairie Plough made at Chicago, is the invention you have probably heard of. Its cost is about $25 we think, but as to its capabilities we are uninformed.

" S. N. P. of Mo."—There is no question of the practicability of your plan, but there is of its utility. No boat would use it. A slight derangement would prevent its operation, and as every part of an engine should be daily cleaned, the person cleaning it would be likely some day, to set a screw wrong. Of all means for preventing explosion in boilers, resulting from low water therein, the steam whistle alarm is the best. This invention, an engraving of which appeared in the Scientific American a few weeks since, is fast coming into use. We shall make no charge but should be glad to have you use endeavors to obtain for us a few subscribers in your place.

" G. V. of Rhode Island;"—We do not know where the gentleman you refer to resides.

" H. G. of Pa."—All the information you desire will be published before long in the Scientific American.

" T. E. S. of Pa."—The air chamber placed on water pipes near the orifice for discharge, has long been known and is in common use. You could not obtain a patent

" L. M. W. of N. Y."—Your plan for a Corn Sheller is new, we believe. We understand the principle and consider it good. The $3 you enclosed came duly to hand.

" J. F. M. of Pa.—Your improvement for spirit lamps is not new. It is in common use and you could not obtain a patent.

" R. R. of Penn.—The copal must be made without oil. For this purpose it must be mixed with borax, and then it will dissolve in pure alcohol or turpentine. Tritarate the two in a mortar before using the alcohol which should be heated with the mixture in a long necked bottle. The balsam will then mix as one to three, when a liitle warm. This is the direction we have got.

" Z. C. of Iowa."—Your plan for working cranks for paddle wheels is different, but not half so good as that in common use. We have always considered that atmospheric air was necessary to produce butter. Some valuable information upon all the subjects you have named will be published during volume 4. We cannot tell the whole cost of the patent till we see the model of the thing to be patented.

" R. S. I. of R. I."—We shall have several hundred copies of vol. 3 bound which will be ready for delivery in about 2 weeks. Price $2 75.

" W. S. of Vt."—Mr. Z. Parker is at present residing at Philadelphia.

We have several communications on hand, which are necessarily delayed. We will attend to them as soon as possible.

A Characteristic Present.

A splendid plough has been presented by some agriculturalist, to Hon. J. W. Farally, member of Congress from Crawford, Pa., for his defeat of the attempt to have Wood's plough again patented; Wood being dead some twenty years, and speculators having the matter in their own hands. Now only that Mr. Farally sifted this case to the bottom, we believe that the patent would have been obtained The Bill passed the Senate, but was nailed to the floor of the House.

The question between Mr. Ellet, engineer, and the directors of the Niagara Bridge Company as to who shall receive the have mining from passengers who cross the temporray bridge, has been referred for legal decision. Wagons weighing two tons have crossed it.

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American Arts and English Generosity.

Although the following article is somewhat long, we trust that it will be read attentively

England is a nation so truly great, that she might well afford to be somewhat generous. In whatever is splendid of arts or of arms—for all that has tended to promotethe physical welfare of our race, or that has contributed to elevate the dignity of our nature, she stands justly pre-eminent. And it can be a matter of regret, only, that distinctions so justly due, and so freely conceded,—distinctions, we are sure, which no true American would either deny or diminish,—should have any of their lustre tarnished by her assumption of honors which belong to others—honors which would add not a cubit to her lofty stature, and could only deprive a generous rival of an elevation which she seeks in due progress to attain — Yet we believe that there has been scarcely one great invention of our country which Englishmen have not claimed as their own. The steam engine, our own exclusively, if Robert Fulton was an American, has been appropriated by Englishmen as being, in its essence, British discovery. The compound blow-pipe, one of the most useful inventions of American science, has been denied to us altogether by some of the chemists of England; and while unable to deprive us of the fame of the "magnetic telegraph," she has yet destroyed the grace of a generous concession, by attempting to show that Mr. Morse was largely indebted for his original ideas to others. It has fared the same way in the learned professions. Operations in surgery, first performed by Dr. Physic, of Philadelphia—but the sound of which he did not care to send forth into all lands,—were afterwards repeated in London, and then trumpeted in "The Lancet," an English journal, as evidences of the ever pre-eminent rank of British surgery. And a lawyer of Westminster hall has just published, under his own name, a Treatise upon Evidence, which copies so large a part of the work on the same subject by Professor Greenleaf, of Harvard University, that no American bookseller has dared to reprint it less he might incur the penalties of violating the copyright. But the most bold of all the British assumptions of American genius which we have yet seen, is that of Blanchard's well known "Machine for Turning Irregular Forms," a modification, as some of our readers may know, of the turning lathe, by which the workman is able to re-produce, out of ivory, metal, marble, or other hard substance, an exact fac-simile, reduced or enlarged to any size, of any irregular figure which can be inserted in the machine; and by which the most elaborately wrought pendants of flowers, alto and basso relievos of involved groupings, and statuettes of the minutest size, can be cut after any given model, by the commonest workman, by a horse, or by steam, with a delicacy, expressiveness, precision and perfection, which it is not too much perhaps to say could not be achieved on so small a scale by the chisel of Mr. Powers himself. Of the American priority of this invention, we will speak directly. In the meantime, let us mention that a recent number of the London Art Union lauds and magnifies, as a new and wonderful proof of British genius, a machine just patented in England, by which it is announced that "any solid form can be copied which the mind of the artist can conceive, or the hand execute," and felicitates its readers upon the astounding intelligence that "statuetts of the most finished form, retaining the delicate touches which are the charm of their originals," can be carved by this newly invented lathe. Now, for the benefit of our English friends, we beg to inform them that the invention of our modest countryman, Mr. Thomas Blanchard, of Boston, has been known and used by American mechanics and men of science, for about 30 years; that it has been thrice patented by Congress, and its publicity, as Americans supposed, thus reasonably secured; that the originality of Blanchard's invention has been repeatedly established by Judge Story, and other eminent jurists, of whose opinions we dare not suppose Englishmen to be entirely ignorant Indeed, a specification of the invention was published, if we remember, about the year 1820, in the well-known London "Journal of Arts and Sciences." The invention itself, in its application to cutting gun-stocks, has long been in use in the public armory works of the United States at Springfield, and other places visited by vast numbers of English travellers in this country: and we may even say that its merit has been acknowledged by "as handy men as ever trod on neat's leather," since a vast proportion of all the shoe lasts of our country are cut by it. In its application to the fine arts Mr. Blanchard's name has not been so extensively known only because the fine arts are so much less profitable in our country than the useful; but for years and years past, his machine has cut, at his factory in Boston, statuettes from marble, and cameos and intaglios from shell, with the precision and beauty of Italian hand work. Any of our readers who may visit his factory there or the office of Mr. A. K. Carter, at Newark, N. J., to whom Mr. Blanchard, we are told, has assigned his patent for those regions, may see statuettes of Webster, Clay, Gen. Taylor, Judge Woodbury, and other gentlemen, which will justify the eulogy which the London Art Union bestows upon the productions of the British machine. The machines, in short, are identical, the only difference being that the American one is about thirty years the oldest.

The history of men of genius is too often a sad one! They pass their own lives in researches and labors, of which others alone derive the benefits. They generally fail to gain bread. It is too bad not to let them have glory!

[The above article is from a late number of McMakin's Model Courier, which came to us marked for particular examination. It is much longer for our columns, as an extract—than we are in the habit of selecting, but we could not condense it without altering it for the worse. The English invention which is the subject of the above article, was noticed on page 240 this volume Scientific American. We stated at the time, our apprehension that it would conflict with American patents. We have never seen the machine, but the principle of it as described to us, appears to be the same as Blanchard's. The motions are different this far, that the cutter wheel of the English revolves in a stationary frame, and pattern and rough material to be turned, move horizontally and revolve at the same time. Now Blanchard's machine is superior to this but is the same in principle; for the difference is simply this, that Blanchard's cutter moves horizontally carrying the cutter wheel from end to end of the lathe while the pattern and rough material revolve in a swinging frame The cutter wheel however, has not an *eccentric motion* as we hastily mentioned in our last, having somehow overlooked the error; but it may be said to cut eccentrically, as it cuts out or turns any form whatever of the pattern. We like to give "honor to whom honor is due," and we agree in sentiment and with the general tone of the above article, but the author has made a mistake in attributing to Robert Fulton the invention of the steam engine. The first engine that Robert Fulton employed on the Hudson was built in Birmingham by the celebrated James Watt.—(What would we not give to have that steamboat and engine with us now, what mementos of two great men.) Robert Fulton was the first successful steamboat inventor, no man can rob him of that honor.

As it respects American and English inventions, the English journalists have blamed us for stealing their inventions, as is stated in the above article. The Scientific American was snarled at last year by Mr. Johnstone of the Glasgow Practical Mechanic, and blamed for "taking *British inventions*, and tacking Yankee names to them."

Now this we have never done to our knowledge, we always give the inventor *his due* let him belong to what country he may. But to carry out the "free trade" principle of Mr. Johnstone, he published Fitzgerald's cannon from the Scientific American without saying a word about where he got it, and this after having blamed us for the same practice. We do not pretend to enlighten the able editor of the Practical Mechanic in scientific matters, but we certainly can in temper, candor and language.

In some things the British are our superiors—in others we are their superiors. In tools and wood work, we surpass them, in heavy machinery, they are *ahead* of us. This however, cannot be long, for we have a wider field for display—we are more energetic, and it only wants a few rich men, like Mr. Collins of this city, to invest capital for a few years in constructing large steam vessels, &c., when our supremacy will be heralded in mechanism as in politics "Westward the star of empire takes its way."

Congreve Rockets.

The rocket is a cylinder of iron, differing nothing in shape or proportion from the paper rocket used in fireworks; it is also furnished with a stick as they are, and fired in the same way. The difference and the secret, whatever it may be, is in the composition, which, though in appearance is like an ordinary gun-powder paste, is of so firm a consistence, as to equal in hardness the iron which surrounds it. The diameter of the largest rocket hitherto used in bombardment, was eight inches; of the smallest used in field service something less than three inches; in all cases the length of the cylinder is eight times its diameter. The flight of rockets, too, varies between one thousand and two thousand five hundred yards in proportion to their size. Those intended for a bombardment are usually armed with shells, containing twenty pounds of powder, and a strong iron case of combustible matter, whose violence is inextinguishable. For field service, they are either armed with shells, or the top of the rocket formed into a mortar, which may be be made to discharge at any period of its flight, from fifty to two hundred musket-balls. Three field rockets may easily be carried by an infantry soldier, and they need no other apparatus for firing them than such as may be made from six muskets and a halbert, should not a bank or wall present a more convenient stand. No rocket of more than three hundred pounds has yet been used even in bombardments; but some time ago, Sir William Congreve, the inventor, proposed the use of rockets exceeding a ton in weight; these were to carry each several barrels of gunpowder in a massive base of steel; wherever they stuck, the impetus of their prodigious weight would force them indifferently through earth and mason work; thus heaving into the very centre of the enemy's fortification a mine whose explosion would leave but little trace of the curtain, tower or bastion on which it should alight.

Introduction to a Philosopher.

I must relate the circumstances of my first introduction to the learned Professor Cramer, since they were truly original. He had a country house in the suburbs; and when I called to pay my respects, I was told I should find him in his garden. I heard the sound of laughter and merry voices as I approached, and saw an elderly gentleman bent forwards in the middle of a walk, while several boys were playing leap-frog over him. A lady who stood by him said, as soon as she perceived me, "Cramer, Steffens is there."—"Well (he said, without moving,) leap then. I was delighted with the new mode of introduction to men of science, took my leap clean over him, and then turned round to make my bow and compliments. He was delighted; and as my good leap also won the hearts of the young people, I was at once admitted as an acquaintance in the happy circle. Notwithstanding this quaint reception, Cramer was a man of deep reflection, with all the quiet manner of a true philosopher.—Steffens' Journey to Paris.

Test for the Purity of Wine.

Put into a phial sixteen grains of sulphuret of lime, (prepared by exposing to a red heat, in a covered crucible, equal weights of powdered lime and sulphur) and twenty grains of super-tartrate of potass (cream of tartar)—Fill the phial with water, cork it well, and shake it occasionally, for the space of ten minutes. Separate the clear liquid by decantation, and preserve it in a well-stopped bottle for use. A portion of this liquor, fresh prepared, when added to wine containing lead, produces a blackish precipitate.

Printing in America.

The first paper mill in America was erected in Boston. in 1730, the legislature of Massachushetts granting aid. The first type-foundry was established at German-town, Pennsylvania, several years before the Revolution, from which the Bible and other works were printed in the German language. As late as 1810 there were but three type-foundries in the United States. The first printing-press in the colonies, and for twenty years the only one in North America between the Gulf of Mexico and the Frozen Ocean, was established at Camrbidge, in 1638. It was nearly a century later, (1727,) before the Virginia colonists permitted a press to be set up. Rev. Jesse Glover procured the press used at Cambridge, by contributions of friends of learning and religion in Amsterdam and in England, but died on his passage to the new world. Stephen Day was the first printer, and as such received a grant of 300 acres of land. The third book published was "The Psalms in Metre." In 1661, the New Testament and Baxter's Call translated by Elliot into Indian language, were printed, at a cost of some £1,200. The whole Bible was printed in 1663. The nation speaking this language is now extinct.

The first Newspaper printed in the North America colonies was called "The Boston News-Letters," and was issued in 1740, by John Campbell, a Scotchman, who was postmaster and a bookseller at Boston. Sometimes it had one advertisement, and often none. After fourteen years, when 300 were sold, the publisher announced that his weekly half sheet being insufficient to keep up with the foreign news, he should issue an extra sheet each fortnight; which expedient he announces, after a year, has enabled the "News-Letter" to recover eight months of the thirteen that it was behind in the news from Europe; so that those who would hold on the next January, (five months,) might expect to have all the arrearages of intelligence from the old world "needful for to be known in these parts." After sixteen years, the publisher gives notice that copies of the "News-Letter" would be "printed on a whole sheet of writing paper, one half of which would be blank, on which letters might be written," etc.

Such was the infancy of newspaper enterprise in this country. What a change since then. Could John Campbell step into the office of one of the "dailies," with its press rolling out 8,000 or 10,000 sheets in an hour, what would be his emotions?

Harding the Painter.

We find the following pleasant notice of Mr. Chester Harding, in Catlin's recent work.

"The next morning, at the hour named found me at the door of the palace, where my name was recognized, and I at once was ushered into the apartment of the Duke [the Duke of Sussex], where I found him in his arm chair, wrapped in his morning gown of white flannel, and his head covered with a cap of black velvet richly embroidered with gold. He rose and took me by the hand in a cordial manner, and instantly led me to another part of the room, in front of a portrait hanging on the wall.. 'There,' said he, 'do you know that face?' 'Very well,' said I; 'that is the portrait of John Hunter; it is an admirable likeness, and looks to me like a picture by one of our American artists. If I had met it any where else but in this country I should have said it was by Harding, one of our most valued portrait painters.' 'Well,' said he, 'you know that portrait too, do you?' 'Very well; that is his royal highness the Duke of Sussex.' 'Well,' said the Duke, now I will tell you, they were both painted by Mr. Harding. Harding is a great favorite of mine, and a very clever artist."

The Drunkard and Snake.

Two gentlmen coming up St. Louis street, New Orleans, had their attention excited by a peculiar noise at the corner of Franklin and the former street. Looking about, they found a drunken man lying in the gutter, with a snake wound round his body. They despatched the snake, which measured eleven feet in length, and had the man taken care of.

Some will no doubt be calling this a snake story,—the same here.

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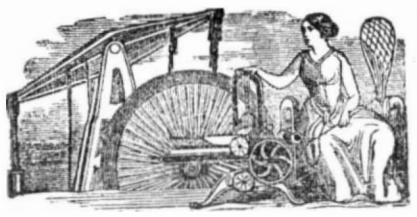


New Inventions.

Improved Parasols.

A patent has been secured lately for an improvement in ladies' parasols whereby a circular spring of india rubber is applied to the ribs, which performs wonders in the fashionable world. A small ring of the vulcanized india rubber is placed around the ribs at the point at which they meet at the apex of the parasol; when the ribs are expanded the elastic power of the ribs enables it to be stretched, so as to suit the exigency, while its power of contraction is so great that it forces the ribs together and keeps them compressed. By touching a spring at the handle, the ribs expand to the utmost tension in a moment. The peacock has long bore away the palm of victory for a sudden show of his fan like showy plumage, but here comes art in the shape of a new parasol, and eclipses the oriental bird in a twinkling.

New Coffee Pot.

A new coffee pot, named a French coffee maker, has just appeared, and for warm weather is a most useful and beautiful invention. It consists of a cup of the capacity of a pint, placed upon a metal plate, upon which spirits of wine being ignited will boil the coffee in a very short time, the cup having been supplied with water, and a small quantity of ground coffee. The effects of the heat not only produces coffee, but actually causes it to run in a small spout issuing from the side.

We do not know where these coffee pots are made, having only heard of their existence. We are positive that improvements in cooking utensils might be made so as to cook with flame of gas, and if gas could be supplied at a cheap rate to private families, a great saving would be effected. The gas consumed for cooking would be no more expensive than charcoal, and the trouble and disagreeable kindling of furnaces would be entirely dispensed with. In point of cleanliness, the gas would certainly supersede the coal, although it might cost more. There are great improvements yet to be made in domestic economy.

New Knitting Machine.

Mr. O. C. Phelps of Mass, has recently made some very important improvements in the knitting machine, whereby stockings may be knit whole, legs and all, without seam.

Improved Strainer for Pails.

Mr William Cooley, of Geneva, N. Y. has invented and applied for a patent for new and useful improvement of attaching a strainer to milk pails, which appear to be as valuable as the improvements which have lately been made on churns. His plan is to have the strainer fit on to a tube or spout on the pail by a screw or slide, so that it can be put on and taken off at pleasure, thus rendering the strainer easier cleaned and at the same time one strainer will answer a number of pails better than a seive and at one-fifth the expense.

New method of Silvering Glass.

The London Atheneum states that a Mr Drayton of Regent street, that city, has discovered a new process of silvering glass which will entirely do away with the old, injurious, and dilatory process of silvering by mercury and tin. Nor is this its only advantage. The silvering is richer in its texure than that produced by the old process; and it may be touched with the finger and still left untarnished. This important improvement is produced by a solution of nitrate of silver in water and spirit mixed with ammonia and the oils of cassia and of cloves. Some of the glass thus silvered is extremely beautiful.

A floating Tunnel.

One of the most extraordinary plans submitted for the approval of the French Academy of Sciences is that of M. Ferdinand, engineer, who proposes to construct a floating tunnel from Calais to Dover, for the wires of the electric telegraph, and large enough to be traversed by small locomotives, for the conveyance of passengers. The plan was referred to one of the members of the academy for examination.

A tunnel for the wires of the electric telegraph across a channel only 25 miles broad, we believe to be perfectly practicable and require no great genius to conceive or construct, but a floating tunnel for locomotives is as preposterous as it is useless.

Process for preserving Milk for any length of time.

This process, invented by a Russian chemist named Kirkoff, consists in evaporating new milk by a very gentle fire, and very slowly, until it is reduced to a dry powder. This powder is to be kept in bottles carefully stopped. When it is to be employed, it is only necessary to dissolve the powder in a sufficient quantity of water. According to M. Kirkoff, the milk does not lose by this process any of its peculiar flavour.

Artificial Preparation of Ice.

After numerous trials made by M. B. Mujlink with different salts, for the purpose of converting water contained in a tin vessel into ice, during their solution, he ultimately gave the preference to a mixture of four ounces of nitrate of ammonia, four ounces of subcarbonate of soda, and four ounces of water. This mixture in three hours produces ten ounces of ice, while with the mixture of sulphate of soda and muriatic acid, he obtained ice only after seven hours.

Improvements in Blasting.

This engraving represents an iron wedge wad, invented for the purposes of blasting by Elizur Wolcott, of Thompsonville, Connecticut. Those who are acquainted with blasting will immediately perceive that it is a new and beautiful improvement.

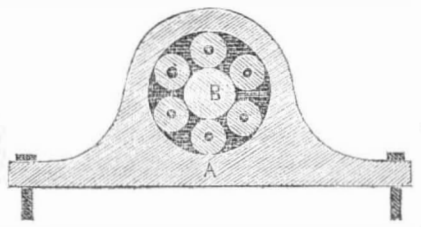
The improvement consists in employing a circular wad with side wedges which fit into grooves—one on each side. A, is the iron wad, and B B, are the side wedges. C, is the handle of the wad. When the wad is seated upon the blast the wedges and wad fit the bore exactly, for the grooves are so cut, as will be seen by the dotted lines, that the wedges fit the dotted lines correctly. But whenever the charge is ignited, A is driven up as seen in the engraving—and the wedges expand, acting in an inverted manner from the way in which the common wedge is used, and the blast by this means rives and splits the rock in a lateral direction, in a most effectual manner. The higher A is driven upwads the greater is the expanding power exerted on the wedges, for the space between the lever ends of the wedges decreases as the wedge ends expand. Measures have been taken to secure a patent.

New Steam Frigate.

A new steam frigate of 50 guns was lately lanched at Glasgow, Scotland. Her engines are different from any ever constructed there before, at least as applied to steamboats—but are not new here. They are of the horizontal kind of 580 horse power and drive a screw of 16 feet 6 inches in diameter and 18 feet pitch. The cylinders are 84 inches diameter with a four foot stroke and calculated to make 30 revolutions per minute. The engines were made by R. Napier, Esq. and are said to be beautiful in workmanship, but on a trial of her speed she only made about eight and a half miles per hour, so it appears she is a miserable sailer, although her hull is allowed to be the finest in the British navy.

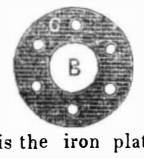
Friction Roller.

Fig 1.



Friction rollers are considered by many to be superior to friction wheels. The rollers must be turned and fitted wtth the utmost exactness and care. In figures 1 and 2 as seen here, are represented a box and circular plate for friction rollers which shew how they are arranged with the journal and a shaft and the offices they perform.

Fig 2.



A, fig 1., is the iron plate bolted to the frame and the interior of the box is represented by the rollers surrounding B, the journal arranged at equal distance in the box moving with only a small part of their ends in contact with the ring as represented by C.—The rollers must be all of the exact diameter and perfectly true, and must fill up all the space between the journal and the ring.—These rollers roll round with B, their velocity being in proportion to the diameters of the journal and the ring, the journal resting in the centre supported by the six rollers. The plates of this box are useful to prevent the rollers from shifting their position, and the ends of the rollers are made a little convex. This plan of friction rollers have but little perceivable friction when in motion but they are apt to get out of order, if dust get admitted, and if there are inequalities in the hardness of the rollers, they are apt to be wore flat in some places by the gudgeon and then they become an evil instead of a benefit.

Cypress Wine.

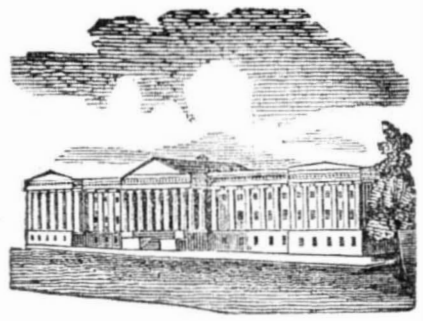
To eighty pints of water add ten pints of the juice of elder berries. The berries are to be lightly pressed: each pint of the liquid will contain three ounces of juice, and to the whole quantity add two ounces of ginger and one ounce of cloves. Boil the whole for an hour. Skim the liquid and pour it into a vessel which should contain the whole, throwing in a pound and a half bruised grapes, which leave in the liquor until the wine is of a fine colour. This wine bears such a resemblanee in colour, flavour, and aroma to the best Cyprus wine, that the most experienced Parisian connoisseurs have been deceived by it.

New kind of Fence.

In some parts of Wisconsin they are making fences as original and new as the state itself: and the material is gravel of medium coarseness, and sand, with the addition of sufficient lime to convert the mass into mortar; and this in the state of mortar is poured between boards confined so as to form a mould for the ascending wall. It is a cheap building material for houses, and it is the prevailing impression that it will be durable.

A Good Disinfectant.

A liquid made up of four ounces of the nitrate of lead and two pounds of water, is said to be excellent for the purpose of disinfecting the emanations from animal matter.



LIST OF PATENTS

ISSUED FROM THE UNITED STATES PATENT OFFICE,

For the week ending Sept 5, 1848.

To Joseph J. Barronowski, Empire of Russia, for improvement in calculating machines. Patented in the U S. Sept. 5, 1848. In France Nov. 25, 1847.

To Joseph Fillemier, of Philadelphia, Pa., for improvement in cutting Veneers into figures. Patented Sept 5, 1848.

To Warren Jenks, of Schroon, N. Y. for improvement in method of setting Steel Traps. Patented Sept. 5, 1848.

To Benjamin H. Latrobe, of Baltimore, Md, for Compound Rail for Railroads. Patented Sept. 5, 1848.

To John Ormiston, of Waterford, Ohio, for improvement in Ploughs. Patented Sept. 5, 1848.

To Alonzo D, Perry, of New York City, for a Portable Lock. Patented Sept. 5, 1848.

To Edward J. Stearns, of Ellicott's Mills, Md., for improved Self-acting Rail and Switch. Patented Sept. 5, 1848.

To Jonathan W. Whitney, of Buffalo, N. Y. for improved Axle Tree. Patented Sept. 5, 1848.

To E. B. Bigelow, of Boston, Mass., for improvement in apparatus for stretching and drying cloth. Patented Sept. 5, 1848.

To Robert Criswell, jr., of Chambersburg, Pa., for improvement in the Cultivator Point. Patented Sept. 5, 1848.

To George Sweetland, New Haven, Conn., for improvement in Pulp Machines. Patented Sept. 5, 1848.

To John M. Pratt, of Dudley, Mass., for improvement in the mode of incorporating Flocks with Flannel, &c. Patented Sept. 5, 1848.

INVENTOR'S CLAIMS.

Valves of Water Rams.

H. P. M. Birkinbine, Philadelphia, Pa., for improvement in valves of water rams. Patented Aug. 15, 1848. What he claims therein as new, is, first, the construction of the valve in the manner described, so as to enclose a water cussion between the moving and stationary parts, and also, the cup or air chamber within the valve to relieve it from the shock it is otherwise subject to. Secondly, he claims the safety valve in a diagram, or in the piston, by which the safety and perfect working of the parts are insured.

Cultivators.

Nathan Baker, Flowerfield. Mich., for improvement in cultivators. Patented Aug. 15, 1848. What he claims as new is the manner of arranging the wheels diagonally to the carriage or main frame.

Bee Hives.

Oren Stoddard, Busti, N. Y., for improvement in bee hives. Patented Aug. 15, 1848. What he claims as his improvement is the manner of preventing robbery by means of the trap.

Screw Wrenches.

Solyman Merrick, Springfield, Mass., for improvement in Scre Wrenches. Patented Aug. 15, 1848. What he claims is the manner of making and arranging the contiguous binding faces of the jaws, consisting, first, in making them not parallel to each other, but so as to form an angle when the jaws are brought in close conjunction; second, in roughening one of the faces and making the other smooth.

Remember this.

The best Patent Agency is at the Scientific American office. All who have occasion to take out Patents will please bear this in mind, as they will thereby save themselves much time and money.

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NEW YORK, SEPTEMBER 16, 1848.

The end of the Volume.

Our subscribers must now arrange their numbers and get them bound. Those who cannot get them bound conveniently, should fold all their numbers nicely together and stitch them with a stout linen thread, covering all with a strong sheet of pasteboard. The Scientific American is now the Repository of American Art and it would have been of great benefit to our Country had such a paper been in existence twenty years ago. We do not speak thus in reference to any merit of the paper,—it speaks for itself—but we refer distinctly to it as a medium to disseminate a knowledge of American invention and spread abroad a peculiar kind of information. Many a subscriber has saved a great deal of time and money by finding something in our columns, which he had sought for in vain elsewhere. It has often happened too, that many a man has found out to his sorrow that some invention which he had wished to patent had previously been described in our columns. He might have saved both time and money had he been a subscriber As a cheap paper of the kind we would inform our readers that there is nothing like it in the world, five and six dollars per annum is the price of all the monthly magazines devoted to Science or Art and here we present more matter in one year for two dollars than any Scientific perodical does for three times that sum. Those who wish to estimate the value of the Scientific American have but to look over their back numbers. In them they will find much with which they would not part with for ten times what they have paid.

American Steamers.

Experience is the best teacher in all things, and we are learning by experience to construct steamers for ocean navigation. Our first transatlantic steamer, the Washington, is inferior in point of speed. But she will pay for herself; Yankee energy will do this. The United States is a superior sailer to the Washington, and although a fine vessel, the Franklin will, we think, from the construction of her engines, surpass her and all others. Last week there was launched the Georgia at this port, for the New Orleans line, and from her dimensions, and the character of her engines, she will no doubt be a first class vessel, unsurpassed by any other whatever. She is of tremendous proportions, being 251 feet long, depth of hold 25 feet; having 49 feet beam, and about 2700 tons burden, 900 tons more than the America. The engines of the vessel are side lever marine, with cylinders 85 inches in diameter, and 8 feet stroke, having 2 engines and 4 boilers. The arrangement for the boilers is somewhat novel, two fore and two abaft the engines. The solidity of the timber and the strength of fastening, are greater than any vessel ever launched; the thickness through the bilge of the vessel is 32 inches. The floor timbers are 20 inches deep, placed closely together and bolted lengthwise. The outside planks are 6 inches thick, the inside ceiling of the vessel is 6 inches, and the clamp streaks 7 inches. The deck beams are 12 by 15, and 13 by 15 inches, all secured with knees resting on the water ways of the ship.

The engines, which are of the most substantial workmanship, work entirely under deck. We should have preferred to have seen the bore of the cylinders 96 inches in diameter, instead of 86. There appears to be no standard of proportion between the stroke and bore among engineers and yet it appears to us, that there must be a geometrical relationship. Observation might lead to the discovery of definite proportions. America is yet destined to have an excellent steam navy, and in our opinion it would be folly to build any more mere sailing ships or frigates of war. Steamships are the toast for active and effective service. It was the opinion of Sir Sydney Smith — not the essayist—but the great sailor and general, that the large ships of war in the British navy, would yet be transformed into coal luggers for the steamships.

Kyanized Ships.

A correspondent recently gave in your papaper some valuable facts in regard to a plank road in Tennessee. He said the sleepers were kyanized, and, besides being thereby rendered proof against moisture, were entirely preserved against worms and insects It occurred to me at once that if the timbers and planks of ships were kyanized, they would be rendered stronger, more durable and more economical. The great expence now incurred for repairs would be saved, the interior wood work would not become worm eaten, and copper sheathing would be unnecessary, since water would not affect the planking, neither would barnacles, sea worms and insects fasten more readily upon the uncovered bottom than they now do upon the sheathing, if as much, since the indurating liquid would be poisonous to them.

The suggestion may not be new though I have never seen it before. W. F. L.

There is a process patented in England by a chemist named Payne, which has been highly praised both as a wood preservative from decay, and from being destroyed by fire. The process, is to exhaust the air from the pores of the wood and introduce a liquid that will form an insoluable salt in the wood. For ordinary purposes, in the first instance, a solution of sulphate of iron, (copperas) and then one of muriate of lime are injected, these, by double decomposition, form sulphate of lime and muriate of iron. When the timber is required to be uninflammable, alum as well as iron, is injected. When timber is required to be proof against worms sulphuret of barytes and sulphate of iron, or of alumina, both or either of the latter, are used.

The wood to be saturated, is first placed into a cylinder resembling one of our high pressure boilers; from this the air is exhausted commonly, by introducing steam, and then effecting its condensation, when a vacuum is produced, or where steam cannot be conveniently applied, the same result can be obtained, but at a greater expense of labour, by means of the air pump. When the interstices of the wood are exhausted of the air which they contain, the solution of copperas is first introduced, and in order more effectually to penetrate the body of the wood, throughout, powerful pressure is applied by the agency of the force pump. Another vacuum is then obtained in the cylinder, when the second solution is forced into the timber in a similar manner, and the two combining, at once produce an insolve le substance, with which the pores of the wood is thoroughly charged throughout.

Many parts of vessels have been prepared with wood preservatives and the only portion of the Royal George and the piles of the old London Bridge, found to be sound, were those impregnated with oxide of iron and a calcareous matter imbibed from the sea water, whilst the remaining portions were either destroyed or rotted.

The utility of Payne's process has been fully tested. The British government has extensively adopted it, in the construction of the new Houses of Parliament and the British Museum.

Many of our vessels use salt as a preservative, running it between the planking through proper orifices. The fine packet ship Patrick Henry is treated with some bushels of it, at the end of every voyage.

Payne's process has been so highly extolled by some of our London exchanges, that we are forced to be prudent in our opinion of its merits and properties but consider it with moderate views as being very good.

Are you trying?

With our last issue we sent to every subscriber a prospetcus for our new volume, with the request that all would try to obtain a few additional names. We hope each one will endeavor to send us three subscribers, and thus receive the gift which we offered.

The Crank.

Perhaps there is no piece of mechanism, so famous in controversial story, as the crank, especially as it regards its qualities for converting reciprocating into circular motion. Eminent engineers have combatted from dawn till eve upon this point, then sheathed their swords for lack of argument. We have brought up the subject at this time just to indulge in the expression of a few ideas on the subject more of a practical than a theoretical nature.

Fig. 1.

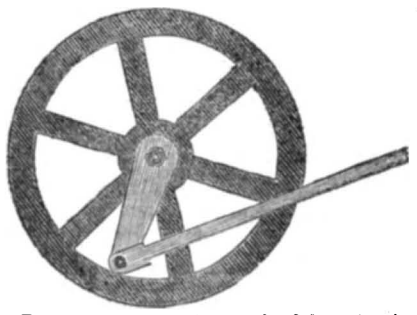
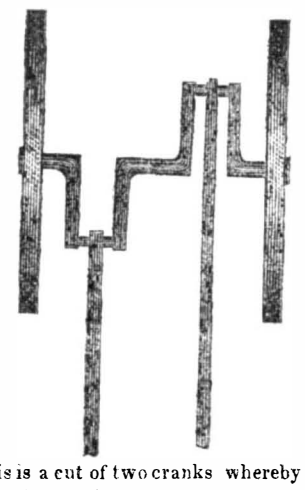


Fig 1 represents the crank driven by the reciprocating motion of the connecting rod which communicates a circular motion to the fly wheel, and some heroes have beheld one half of the power lost by the dead points, (a perpendicular line with the centre of gravity) All the controversies that we have read upon this mooted point, were wonderfully mystic in signification, and we have beheld with grief many a poor fellow get into a fog of his own calculations, out of which he could not march except backwards with his eyes shut.

Fig 2.



This is a cut of two cranks whereby a reciprocation motion may be communicated to work a pair of pumps by the circular motion of the shaft of a water wheel. We have seen a neat little engine (upright) dispense with the walking beam by having a broad wheel on each side of the crank, the piston being connected with the crank, the broad wheels fixed on the framing answered well for band wheels to communicate the power of the engine to other machinery by straps.

As it respects the true value of the crank, the question without going into any figures on the subject, just lies in this little point "what is the better plan?" Can any person, has any person been able to show a simpler and better plan as a substitut for the crank?—Not one There then is an end to the argument, and after all what loss is there but in the friction, and the motion of the crank is just as natural as any other motion, and as a piece of mechanism it has no superior in its own place. Men could not run any faster if they had legs made of wheels; and no greater tribute was ever paid to the beauty and utility of the crank combined with the steam engine, than that of James Watt when he laid down his sun and planet wheels, and adapted the simple crank.

The Mississippi Valley.

Upon the Mississippi river and the tributary streams are now about 500 steamboats, with capacity to carry, at one trip, near two hundred thousand tons. Assuming that these boats will make an average of thirty-six trips in the year, they would transport seven millions two hundred thousand tons! Vast as is now the trade upon these rivers, it is small to what it will be Of the land drained by this great river, not more than one-tenth of it is in cultivation. when the nine-tenths now not cultivated shall be brought into such cultivation as now exists on the other tenth, the demand for tonnage for its transit, compared with the present, will be as nine to one; so that five thousand steamboats will then be required upon the waters that now employ five hundred. It is also fair to presume that the constantly improving husbandry of the West will, at no distant period, double the production of lands, a large majority of which are under the most careless cultivation. In this latter case ten thousand steamboats would be required on the Mississippi river and its tributary streams.

Supposing that five thousand of these boats should run below the mouth of the Ohio and above New Orleans, and that each boat should pass a given point, say Natchez, once a week, 714 boats would pass that point each day, 30 boats each hour, or a single boat every two minutes; every four minutes one boat would ascend and the other would descend the river; so that a boat descending the river at the rate of ten miles to the hour, would meet thirty ascending boats: and one descending at the rate of twenty miles to the hour, would meet sixty ascending boats. Time, which has more than verified the prediction that the trip from Orleans to Lousiville would be made in ten days, will also more than realize these calculations. Calculations made upon the future powers and resources of this country have always been too small.

Aboriginal Industry.

By the census of Indian tribes, which is now in the process of being taken, says the Union, it is shown that the seven small bands of Ottowas about Michilimackinack, numbering about 700 souls, who rely wholly on agriculture for a subsistence, have raised during the last season 25,000 bushels of corn and 40,000 bushels of potatoes. They also made, the past spring 325,000 pounds, or over 147 tons, of maple sugar; which is worth at the Mackinaw market, seven cents per pound, making $52,750 on sugar alone. Corn is worth at the same place, 50 cents and potatoes 37 1-2 cents per bushel. This single example shows what the Indian tribes could do for themselves were they all to make a bold appeal to agriculture for a living, and abandon the chase.

Massachusetts Carpets.

There have been manufactured at the large carpet factories in Roxbury, belonging to Henry Pettes & Co, within the year commencing August 1, 1847, and ending August 1, 1848, upwards of two hundred and fifty thousand yards of carpeting.

This large quantity has all been sold at their warehouse in Boston.

They manufacture all descriptions of ingrain and three ply carpets, tapestry Brussels and velvet pile carpets and rugs

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